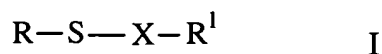


IN THE CLAIMS

Cancelled claim 27 is new.

Please amend the following of the claims which are pending in the present application:

1. (Original) A method of forming a disulfide bond, the method comprising reacting an organic compound comprising at least one thiol group with a compound of formula I:



wherein:

X denotes SO₂ or Se;

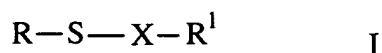
R denotes an organic moiety; and

R¹ denotes an optionally substituted alkyl group, an optionally substituted phenyl group, an optionally substituted pyridyl group or an optionally substituted naphthyl group;

with the proviso that when X denotes SO₂ then R¹ does not denote optionally substituted alkyl.

2. (Original) A method according to claim 1, wherein the organic compound comprising at least one thiol group is an amino acid, a peptide or a protein.

3. (Original) A method of chemically modifying a protein, peptide or amino acid comprising at least one thiol group, the method comprising reacting said protein, peptide or amino acid with a compound of formula I:



wherein:

X denotes SO₂ or Se;

R denotes an organic moiety; and

R¹ denotes an optionally substituted alkyl group, an optionally substituted phenyl group, an optionally substituted pyridyl group or an optionally substituted naphthyl group;

with the proviso that when X denotes SO₂ then R¹ does not denote optionally substituted alkyl.

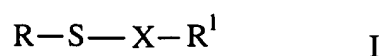
4. (Currently amended) A method according to ~~any one of claims 1 to 3~~ claim 1, wherein R is a carbohydrate group.

5. (Currently amended) A method according to ~~any one of claims 1 to 4~~ claim 1, wherein R¹ is phenyl.

6. (Currently amended) A method according to ~~any one of claims 1 to 5~~ claim 1, wherein X is Se.

7. (Currently amended) A method according to ~~any one of claims 1 to 5~~ claim 1, wherein X is SO₂.

8. (Original) A compound of formula I:



wherein:

X denotes SO₂ or Se;

R denotes a carbohydrate moiety; and

R¹ denotes an optionally substituted alkyl group, an optionally substituted phenyl group, optionally substituted pyridyl group or an optionally substituted naphthyl group;

with the proviso that when X denotes SO₂, then R¹ does not denote optionally substituted alkyl.

9. (Original) A compound according to claim 8 wherein R¹ is phenyl.

10. (Currently amended) A compound according to claim 8 ~~or claim 9~~, wherein X is Se.

11. (Currently amended) A compound according to claim 8 ~~or claim 9~~, wherein X is SO₂.

12. (Original) A method for preparing a compound of formula I as defined in claim 11, said method comprising reacting a compound of formula II:



wherein:

M denotes a metal, for example Li, Na, K, Ca, Cs, Zn, Mg, or Al; and

k denotes 1, 2 or 3;

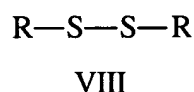
with a compound of formula III:



wherein:

L denotes a leaving group.

13. (Original) A method for preparing a compound of formula I as defined in claim 11, said method comprising reacting a disulfide compound of formula VIII:



with a sulfinite anion of formula R^1SO_2^- in the presence of silver ions.

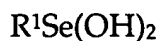
14. (Original) A method for preparing a compound of formula I as defined in claim 10, said method comprising reacting a compound of formula V:



with a compound of formula VIa or VIb:



Vla



Vlb

wherein L^2 denotes Br, Cl, CN, or I.

15. (Currently amended) Use of a compound of formula I as defined in ~~any one of claims 1 to 7~~ claim 1, in disulphide bond formation.

16. (Currently amended) Use of a compound of formula I as defined in ~~any one of claims 1 to 7~~ claim 1, for modifying a protein, a peptide or an amino acid comprising at least one thiol group.

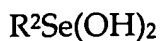
17. (Currently amended) Use of a compound of formula I as defined in ~~any one of claims 8 to 11~~ claim 8, for glycosylating a protein, a peptide or an amino acid comprising at least one thiol group.

18. (Original) A method of chemically modifying a protein, peptide or amino acid comprising at least one thiol group, the method comprising converting said thiol group into a selenenylsulfide group.

19. (Original) A method according to claim 18, wherein the conversion is carried out by reacting the protein, peptide or amino acid comprising at least one thiol group with a compound of formula Xa or Xb:



Xa



Xb

wherein:

L^2 denotes a leaving group; and

R^2 denotes an optionally substituted alkyl group, an optionally substituted phenyl group, an optionally substituted benzyl group, an optionally substituted pyridyl group or an optionally substituted naphthyl group, or R^2 forms part of or is attached to a solid support.

20. (Original) A method according to claim 19, wherein R^2 is phenyl.

21. (Original) A method according to claim 19, wherein the compound of formula Xa or Xb is PhSeBr.

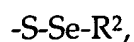
22. (Currently amended) A method according to ~~any one of claims 18 to 21~~ claim 18, further comprising reacting the selenenylsulfide group in the protein, peptide or amino acid with an organic compound containing a thiol group.

23. (Original) A method of chemically modifying a protein, peptide or amino acid comprising at least one selenenylsulfide group, the method comprising reacting the protein, peptide or amino acid with an organic compound comprising a thiol group.

24. (Currently amended) A method according to claim 22 ~~or claim 23~~, wherein the organic compound is a carbohydrate compound.

25. (Currently amended) A method according to claim 22 ~~or claim 23~~, wherein the organic compound is a protein, peptide or amino acid.

26. (Original) A protein, peptide or amino acid comprising at least one selenenylsulfide group, wherein the selenenylsulfide group is a group of formula:



wherein R² denotes an optionally substituted alkyl group, an optionally substituted phenyl group, an optionally substituted benzyl group, an optionally substituted pyridyl group or an optionally substituted naphthyl group.

27. (Cancelled)

28. (Currently amended) A protein, peptide or amino acid comprising at least one selenenylsulfide group which is obtainable by the method of ~~any one of claims 18 to 21~~ claim 18.

29. (Currently amended) A protein, peptide or amino acid comprising at least one disulfide bond which is obtainable by the method of ~~any one of claims 22 to 25~~ claim 22.